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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,387	09/10/2003	Hidehisa Makita	03500.017134	2273

5514 7590 10/27/2004

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EXAMINER

DIAMOND, ALAN D

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 10/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/658,387	MAKITA ET AL.	
	Examiner	Art Unit	
	Alan Diamond	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09092004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Comments

1. The objection to the drawings has been overcome by Applicant's amendment thereof.
2. The Examiner acknowledges that claim 10 has been cancelled.
3. The rejection of the claims under 35 USC 112, second paragraph, has been overcome by applicant's amendment thereof.
4. The instant claims are fully supported by the certified English translation (filed September 7, 2004) of Japanese foreign priority document 2002-090187. Accordingly, the instant claims are afforded a foreign priority date of March 28, 2002. Ressler (US 2004/0000334) can no longer be used as a reference against the instant claims since it has a later effective U.S. filing date of June 27, 2002. Thus, all art rejections based on Ressler are now moot.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 4, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Solow, U.S. Patent 2,823,245.

In Solow's Figure 1, the spacer (18) reads on the instant first support; the solar cell (11) on the right side that is directly supported by spacer (18) reads on the instant

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plate-shaped member having a solar cell; and the solar cell (11) in the middle reads on the instant second support member (see also col. 1, line 55 through col. 2, line 51). The solar cell (11) at the left (which is directly in contact with spacer (17)) reads on the second plate-shaped member in claim 2. Note that each solar cell (11) has a conducting base (12) that is a plate-shaped member. Alternatively, the middle solar cell (11) reads on the instant plate-shaped member having a solar cell, the right solar cell (11) reads on the instant first support, and the left solar cell (11) reads on the instant second support. When such is the case, the conditions of claim 4 are met since each of the solar cells are made of the same material. Also, when such is the case, the conditions of claim 9 are met since the spacer (18) would then read on the insulating member in claim 9. Since Solow teaches the limitations of the instant claims, the reference is deemed to be anticipatory.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solow, U.S. Patent 2,823,245, in view of Arthur et al, U.S. Patent 5,415,700.

In Solow's Figure 1, the spacer (18) reads on the instant first support; the solar cell (11) on the right side that is directly supported by spacer (18) reads on the instant

plate-shaped member having a solar cell; and the solar cell (11) in the middle reads on the instant second support member (see also col. 1, line 55 through col. 2, line 51). The solar cell (11) at the left (which is directly in contact with spacer (17)) reads on the second plate-shaped member in claim 2. Note that each solar cell (11) has a conducting base (12) that is a plate-shaped member. Alternatively, the middle solar cell (11) reads on the instant plate-shaped member having a solar cell, the right solar cell (11) reads on the instant first support, and the left solar cell (11) reads on the instant second support. When such is the case, the conditions of claim 4 are met since each of the solar cells are made of the same material. Also, when such is the case, the conditions of claim 9 are met since the spacer (18) would then read on the insulating member in claim 9. Solow teaches the limitations of the instant claims other than the difference which is discussed below.

Solow does not specifically teach that its solar cells are made from concrete. Note that instant claim 3 requires that the plate-shaped member is cast from concrete material. Arthur et al teaches a concrete solar cell that provides the advantages of being inexpensive and robust (see abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the concrete solar cells of Arthur et al for the solar cells in Solow's device because Arthur et al's concrete solar cells provide the advantage of being inexpensive and robust.

With respect to claim 12, the use of a power conditioner with Solow's device would have been within the skill of an artisan to as to obtain the proper current and/or voltage from the device.

9. Claims 1, 2, 4, 8, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solow, U.S. Patent 2,823,245, in view of Japanese Patent 55-68681 A, herein referred to as JP '681

In Solow's Figure 1, the spacer (18) reads on the instant first support; the solar cell (11) on the right side that is directly supported by spacer (18) reads on the instant plate-shaped member having a solar cell; and the solar cell (11) in the middle reads on the instant second support member (see also col. 1, line 55 through col. 2, line 51). The solar cell (11) at the left (which is directly in contact with spacer (17)) reads on the second plate-shaped member in claim 2. Note that each solar cell (11) has a conducting base (12) that is a plate-shaped member. Alternatively, the middle solar cell (11) reads on the instant plate-shaped member having a solar cell, the right solar cell (11) reads on the instant first support, and the left solar cell (11) reads on the instant second support. When such is the case, the conditions of claim 4 are met since each of the solar cells are made of the same material. Also, when such is the case, the conditions of claim 9 are met since the spacer (18) would then read on the insulating member in claim 9. Solow teaches the limitations of the instant claims other than the difference which is discussed below.

Solow does not specifically teach that its solar cells are composed of amorphous silicon formed on a stainless steel substrate. JP '681 teaches an amorphous silicon solar cell formed on a stainless steel substrate (see the attached English abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an amorphous silicon solar cell on a stainless steel substrate for

each of the solar cells in Solow's device because such a solar cell is conventional in the art, as shown by JP '681.

With respect to claim 12, the use of a power conditioner with Solow's device would have been within the skill of an artisan to as to obtain the proper current and/or voltage from the device.

10. Claims 1, 2, 4-7, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Solow, U.S. Patent 2,823,245, in view of Iwasaki et al, U.S. Patent Application Publication US 2004/0055894.

In Solow's Figure 1, the spacer (18) reads on the instant first support; the solar cell (11) on the right side that is directly supported by spacer (18) reads on the instant plate-shaped member having a solar cell; and the solar cell (11) in the middle reads on the instant second support member (see also col. 1, line 55 through col. 2, line 51). The solar cell (11) at the left (which is directly in contact with spacer (17)) reads on the second plate-shaped member in claim 2. Note that each solar cell (11) has a conducting base (12) that is a plate-shaped member. Alternatively, the middle solar cell (11) reads on the instant plate-shaped member having a solar cell, the right solar cell (11) reads on the instant first support, and the left solar cell (11) reads on the instant second support. When such is the case, the conditions of claim 4 are met since each of the solar cells are made of the same material. Also, when such is the case, the conditions of claim 9 are met since the spacer (18) would then read on the insulating member in claim 9. Solow teaches the limitations of the instant claims other than the difference which is discussed below.

Solow does not specifically teach that said conducting base (12) is fixed to the solar cell using an adhesive. However, such a feature is conventional in the art. In particular, Iwasaki et al teaches bonding an electrically conductive substrate to a solar cell using an electrically conductive adhesive (see paragraph 0208). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have bonded Solow's conducting base (12) to the solar cell using an electrically conductive adhesive because it is conventional in the art to do so, as shown by Iwasaki et al.

With respect to claim 12, the use of a power conditioner with Solow's device would have been within the skill of an artisan to as to obtain the proper current and/or voltage from the device.

Response to Arguments

11. Applicant's arguments filed September 7, 2004 have been fully considered but they are not persuasive.

Applicant argues that "[c]laim 1 recites, *inter alia*, a surface of said plate-shaped member including said one side of said plate-shaped member and not in contact with said first support member has a part in contact with said second support member", and that "Solow is not seen to teach or suggest at least the foregoing feature." Applicant argues that "[a]s shown in Fig. 1 of Solow, the conducting base 12 of the photocell 11 on the right does not have a surface in contact with the photocell 11 in the middle." However, this argument is not deemed to be persuasive because the conducting base 12 of the photocell 11 on the right does have its surface in contact, albeit indirect

contact, with the photocell (11) in the middle. The instant claimed encompass such indirect contact.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

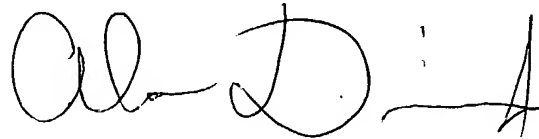
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alan Diamond
Primary Examiner
Art Unit 1753

Alan Diamond
October 26, 2004

A handwritten signature in black ink, appearing to read 'Alan Diamond', with a stylized flourish at the end.